10. (New) A semiconductor device according to claim 1, wherein the concave-convex surface of the first semiconductor substrate is defined by a plurality of concave portions, wherein a width(s) of the concave portions narrows as the depth of the concave portions increases.

11. (New) A semiconductor device according to claim 10, wherein said plurality of concave portions are formed at equal intervals.

REMARKS

This is in response to the Office Action dated April 18, 2002. Non-elected claims 3-5 have been canceled, without prejudice in view of the Restriction Requirement. New claims 6-11 have been added. Thus, claims 1-2 and 6-11 are now pending. Attached hereto is a marked-up version of the changes made to the specification and claim(s) by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

A new title and drawing changes have been made as requested by the Examiner.

For purposes of example and without limitation, certain example embodiments of this invention relate to a semiconductor device (e.g., SOI) and a method making the same. In the Fig. 1 example embodiment, the SOI device includes a first semiconductor substrate 21 having a concave-convex surface due to 21a, 21b, and a second semiconductor substrate 24 supporting a thin film insulator (e.g., thin film Si or thin film

oxide) 25 thereon. The first and second substrates are coupled to one another with the thin film insulator 25 therebetween so as to define cavities 21c in the resulting semiconductor device.

Claims 1-2 stand rejected under 35 U.S.C. Section 102(b) as being allegedly anticipated by Kurtz. This Section 102(b) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires " a first semiconductor substrate including a concave-convex surface; and a second semiconductor substrate having a thin film insulator on a surface thereof, wherein the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the thin film insulator provided on the surface of the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device." For example, see Fig. 1 of the instant application which illustrates thin film insulator 25 provided between semiconductor substrates 21 and 24. Kurtz fails to disclose or suggest the aforesaid underlined aspect of claim 1.

Kurtz discloses first and second Si wafers 10 and 45, wherein first Si wafer includes a plurality of apertures 31-35 defined therein. A glass sheet 40 (alleged by the Office Action to be an insulator) is provided between the two Si wafers. However, claim 1 as amended requires a "thin film" insulator. Glass sheet 40 of Kurtz is certainly not a "thin film" insulator. Moreover, there is no reason why one of ordinary skill in the art would have replaced Kurtz's glass sheet with a thin film insulator. Claim 1 is respectfully submitted to define over the art of record.

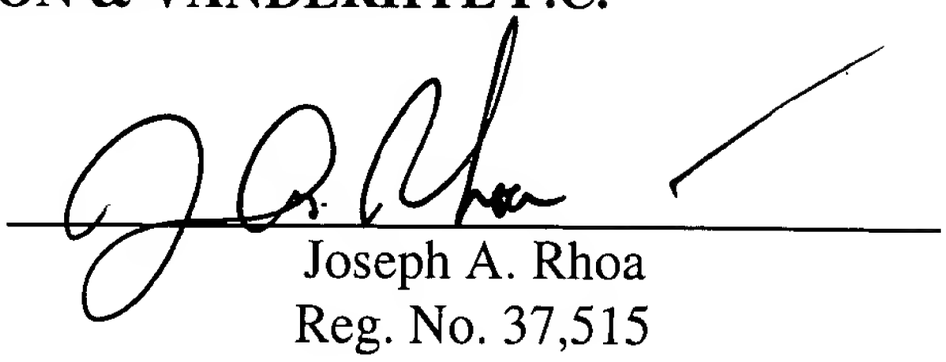
New claim 6 requires that "the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the thin film oxide insulator provided on the ion implanted surface of the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device." Kurtz fails to disclose or suggest the claimed thin film oxide insulator.

New claim 7 requires that "the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the thin film Si layer provided on the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device." Kurtz fails to disclose or suggest the claimed thin film Si layer.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Joseph A. Rhoa
Reg. No. 37,515

JAR:caj
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please cancel claims 3-5 without prejudice in view of the Restriction Requirement.

1. (Amended) A semiconductor substrate device, comprising:

a first semiconductor substrate including a concave-convex surface; and

a second semiconductor substrate having [an] a thin film insulator [insulating film] on a surface thereof,

wherein the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the [insulating film] thin film insulator provided on the surface of the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device.

Please add the following new claims:

6. (New) A semiconductor substrate device, comprising:

a first semiconductor substrate including a concave-convex surface; and

a second semiconductor substrate having a thin film oxide insulator on a surface thereof, the surface of the second semiconductor substrate on which the thin film oxide insulator is provided being implanted with hydrogen ions,

wherein the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the thin film oxide insulator provided on the ion implanted surface of the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device.

7. (New) A semiconductor substrate device, comprising:

a first semiconductor substrate including a concave-convex surface; and

a second semiconductor substrate having a thin film Si layer on a surface thereof,

wherein the first semiconductor substrate and the second semiconductor substrate are brought together so that the concave-convex surface of the first semiconductor substrate and the thin film Si layer provided on the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device.

8. (New) A semiconductor device according to claim 1, wherein the thin film insulator comprises a silicon oxide film.

9. (New) A semiconductor device according to claim 1, wherein the thin film insulator comprises a thin-film silicon layer.

10. (New) A semiconductor device according to claim 1, wherein the concave-convex surface of the first semiconductor substrate is defined by a plurality of concave

portions, wherein a width(s) of the concave portions narrows as the depth of the concave portions increases.

11. (New) A semiconductor device according to claim 10, wherein said plurality of concave portions are formed at equal intervals.